

CLAIMS

1. (Currently amended) A method for enhancing the generation of hydroxyl radicals (OH^*), at ambient temperature, in a liquid aqueous biocidal mixtures mixture containing hydrogen peroxide (H_2O_2), wherein the hydrogen peroxide has an initial concentration of from 2 to 250 ppm, said method comprising the following steps:
 - i) supplying oxygen (O_2) to said mixture by injection of oxygen or air;
 - ii) supplying suspended magnesium oxide to said mixture at a concentration of from 2 ppm to 250 ppm;
 - iii) adjusting the pH of said mixture to a value of from 7.2 to 9.7;
 - iv) irradiating said mixture with UV light having a wavelength of from 190 to 390 nm; and
 - v) mixing said mixture;

~~wherein the generated hydroxyl radicals are accumulated in said mixture to reach a desired amount, said amount being quantified by reacting said radicals with salicylic acid.~~
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Original) The method of claim 1, wherein the oxygen is supplied to saturation.
6. (Canceled)
7. (Canceled)

8. (Previously presented) The method of claim 1, wherein said initial concentration of hydrogen peroxide is from 10 to 50 ppm, and said concentration of magnesium oxide is from 10 to 50 ppm.
9. (Canceled)
10. (Canceled)
11. (Previously presented) The method of claim 1, wherein said mixing is carried out for a period of time sufficient to generate the desired amount of hydroxyl radicals.
12. (Previously presented) The method of claim 11, wherein said desired amount of hydroxyl radicals is an amount sufficient to reach a required biocidal effect in the mixture.
13. (Original) The method of claim 11, wherein said period lasts from 3 seconds to 5 hours.
14. (Original) The method of claim 13, wherein said period lasts from 30 second to 100 minutes.
15. (Original) The method of claim 11, wherein said period lasts more than 5 hours.
16. (Previously presented) The method of claim 11, wherein said desired amount of hydroxyl radicals is a predetermined quantity.
17. (Canceled)
18. (Canceled)

19. (New) The method of claim 11, wherein generated radicals are quantified by a chemical method comprising reacting the hydroxyl radicals with salicylic acid.
20. (New) The method of claim 1, comprising adding hydrogen peroxide to sea water, which sea water is intended to serve as ballast water.